CLAIMS

What is claimed is:

1. A communication system, comprising:

a mobile station having a transmitter operating on one of a plurality of frequency channels in a first RF frequency band;

an associated local area communication subsystem operating by frequency hopping amongst a plurality of channels in a second RF frequency band; and

a controller for altering a frequency hopping pattern of said local area communication subsystem as a function of a currently specified frequency channel in the first frequency band.

2. A communication system as in claim 1, wherein the frequency hopping pattern is altered if the currently specified frequency channel is one having a known frequency or frequency component that lies in the second frequency band.

3. A communication system as in claim 1, wherein the first frequency band is in the range of about 800MHz to about 900MHz, and wherein the second frequency band is in the range of about 2400MHz to about 2500MHz.

4. A communication system as in claim 1, wherein the first frequency band is in the range of about 824MHz to about 891MHz, and wherein frequency hops occur at 2402+k MHz, where k= 0,1,...,78..

5. A communication system as in claim 1, wherein the frequency hopping pattern is altered by excluding at least one of said plurality of channels.

6. A communication system as in claim 1, wherein the frequency hopping pattern is altered by selecting another channel if an excluded at least one of said plurality of channels is selected to be hopped to.

7. A communication system, comprising:

a mobile station having a transmitter operating on one of a plurality of frequency channels in a first RF frequency band;

an associated local area communication subsystem operating by frequency hopping amongst a plurality of channels in a second RF frequency band; and

a controller for altering a frequency hopping pattern of said local area communication subsystem as a function of a currently specified frequency channel in the first frequency band, and as a function of a bandwidth of the currently specified frequency channel.

8. A communication system as in claim 7, wherein the frequency hopping pattern is altered if the currently specified frequency channel is one having a harmonic frequency that lies in the second frequency band.

9. A communication system as in claim 7, wherein the first frequency band is in the range of about 800MHz to about 900MHz, wherein the second frequency band is in the range of about 2400MHz to about 2500MHz, and wherein the bandwidth is in the range of about 30kHz to about 5MHz.

10. A communication system as in claim 7, wherein the first frequency band is in the range of about 824MHz to about 891MHz, wherein frequency hops occur at 2402+k MHz, where k= 0,1,...,78, and wherein the bandwidth is in the range of about 30kHz to about 5MHz.

11. A communication system as in claim 7, wherein the frequency hopping pattern is altered by excluding at least one of said plurality of channels if the bandwidth is about 30kHz, and excluding more than one of said plurality of channels if the bandwidth is about 5MHz.

12. A communication system as in claim 7, wherein the frequency hopping pattern is altered by selecting another channel if an excluded at least one of said plurality of

channels is selected to be hopped to.

13. A method for operating a communication system, comprising:

preparing to operate a mobile station transmitter on one of a plurality of frequency channels in a first RF frequency band;

determining if a harmonic of the frequency channel to be operated has the potential to interfere with communications within an associated local area communication subsystem that operates by frequency hopping amongst a plurality of channels in a second RF frequency band; and

if so, altering a frequency hopping pattern of the local area communication subsystem so as to avoid the interference.

14. A method as in claim 13, wherein the step of determining also considers a bandwidth of the frequency channel to be operated on.

15. A method as in claim 13, wherein the frequency hopping pattern is altered if the frequency channel to be operated on is one having a harmonic frequency that lies in the second frequency band.

16. A method as in claim 13, wherein the first frequency band is in the range of about 800MHz to about 900MHz, and wherein the second frequency band is in the range of about 2400MHz to about 2500MHz.

17. A method as in claim 13, wherein the first frequency band is in the range of about 824MHz to about 891MHz, and wherein frequency hops occur at 2402+k MHz, where k= 0,1,...,78.

18. A method as in claim 13, wherein the frequency hopping pattern is altered by excluding at least one of said plurality of channels.

19. A method as in claim 13, wherein the frequency hopping pattern is altered by

selecting another channel if an excluded at least one of said plurality of channels is selected to be hopped to.

20. A method as in claim 14, wherein the frequency hopping pattern is altered by excluding at least one of said plurality of channels if the bandwidth is about 30kHz, and excluding more than one of said plurality of channels if the bandwidth is about 5MHz.

21. A communication system, comprising:

a mobile station having a transmitter operating on one of a plurality of frequency channels in a first RF frequency band;

an associated local area communication subsystem operating by frequency hopping amongst a plurality of channels in a second RF frequency band; and

a controller for inhibiting transmission of data in the local area communication subsystem when a hopped-to frequency is determined to be a frequency that may be interfered with because of operation of the mobile station transmitter on a currently specified frequency channel in the first frequency band.

22. A communication system as in claim 21, wherein the transmission is inhibited if the currently specified frequency channel is one having a known frequency or frequency component that lies in the second frequency band.

23. A communication system as in claim 21, wherein the first frequency band is in the range of about 800MHz to about 900MHz, and wherein the second frequency band is in the range of about 2400MHz to about 2500MHz.

24. A communication system as in claim 21, wherein the first frequency band is in the range of about 824MHz to about 891MHz, and wherein frequency hops occur at 2402+k MHz, where k= 0,1,...,78..

25. A communication system as in claim 21, wherein the transmission of data is inhibited by disabling an RF modulator.

26. A communication system as in claim 21, wherein the transmission of data is inhibited by disabling an RF carrier.

27. A communication system as in claim 21, wherein the transmission of data is inhibited by transmitting bits other than bits of data.

28. A communication system as in claim 21, wherein the transmission of data is inhibited also as a function of a bandwidth of the currently specified frequency channel.

29. A communication system as in claim 28, wherein the bandwidth is in the range of about 30kHz to about 5MHz.

30. A communication system as in claim 28, wherein the transmission of data is inhibited on at least one of said plurality of channels if the bandwidth is about 30kHz, and is inhibited on more than one of said plurality of channels if the bandwidth is about 5MHz.

31. A method for operating a communication system, comprising:

preparing to operate a mobile station transmitter on one of a plurality of frequency channels in a first RF frequency band;

determining if a harmonic of the frequency channel to be operated has the potential to interfere with communications within an associated local area communication subsystem that operates by frequency hopping amongst a plurality of channels in a second RF frequency band; and

if so, inhibiting transmission of data on at least one of said plurality of channels, when hopping to the at least one of said plurality of channels, so as to avoid the interference.

32. A method as in claim 31, wherein the step of determining also considers a bandwidth of the frequency channel to be operated on.

33. A method as in claim 31, wherein the transmission of data is inhibited if the hopped-

to frequency channel corresponds to a harmonic frequency of the frequency channel to be operated on.

34. A method as in claim 31, wherein the first frequency band is in the range of about 800MHz to about 900MHz, and wherein the second frequency band is in the range of about 2400MHz to about 2500MHz.

35. A method as in claim 31, wherein the first frequency band is in the range of about 824MHz to about 891MHz, and wherein frequency hops occur at 2402+k MHz, where k= 0,1,...,78.

36. A method as in claim 31, wherein the transmission is inhibited by at least one of disabling an RF modulator, disabling an RF carrier, and transmitting bits other than bits of data.

37. A method as in claim 31, wherein the bandwidth is in the range of about 30kHz to about 5MHz.

38. A method as in claim 31, wherein the transmission is inhibited on at least one of said plurality of channels if the bandwidth is about 30kHz, and is inhibited on more than one of said plurality of channels if the bandwidth is about 5MHz.

39. A method as in claim 31, wherein the step of inhibiting includes a preliminary step of transmitting information from a local area communications controller that is co-located with the mobile station to at least one remotely located local area communications controller, the transmitted information including information for specifying identities of one or more frequency channels of the plurality of frequency channels over which transmission of data is to be inhibited.